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Approved By:

Kelly Stange, Regional Agricultural Attaché

Prepared By:

Arlene Villalaz, Agricultural Specialist

Report Highlights:

Panama has been taking the proper steps to develop implementing regulations of the law that created the National Commission of Biosafety for Genetically Modified Organisms. This includes clearing procedures regarding the process and coordination among all the competent government agencies in charge of authorizing the import of GMO's into Panama. At present, Panama has authorized the use of biotech products only for research. Panama ratified the Cartagena Protocol and approved an additional law to oversee biotech products. There is no indication of consumer concern about the presence of biotech products in the food supply.

Section I. Executive Summary:

Panama is a net food importer and the United States is by far its main supplier. During Calendar Year 2011, exports of U.S. agricultural, fish & forestry products to Panama exceeded \$510.4 million of dollars. The increase of 74% over the last year can be attributed to the entry into force of the U.S. – Panama Agreement regarding certain Sanitary and Phytosanitary Measures and Technical Standards affecting trade in agricultural products, in February 22, 2007.

The most important U.S. products exported to Panama for year 2011 were (^[i]):

Consumer Oriented foods.....	\$251.5 million
Grains in Bulk.....	\$162.9 million
Intermediate products (such as oils, flour, and seeds).....	\$79.8 million
Forest products.....	\$11.8 million
Fish products.....	\$4.2 million

^[i] Data Source: Department of Commerce, U.S. Census Bureau, Foreign Trade Statistics

The future looks bright for exports of U.S. food products to Panama due to the forecasted extraordinary growth of the Panamanian economy. This forecast is based on the service sector and the Expansion project of the Panama Canal, which promotes higher demand for food products that local agriculture cannot supply. U.S. food products are already well positioned and have consumer preference. In addition, with the Trade Promotion Agreement between the two countries U.S. food products will have increased access to the Panamanian market at zero percent duties once tariff phase-outs run their course.

Panama has conducted official field testing of agricultural biotechnology events with corn seeds and salmon.

By category, consumers prefer the “Ready to eat products”, such as snack foods, processed fruits and vegetables, and turkey ham, as the most popular. Bulk agricultural products are also important, among them: yellow corn and soybean meal for animal feeds and wheat. Panama imports rice whenever the local harvest does not meet demand. In the past years the United States used to represent 99 percent of the imported rice market.

Panama is a party to the Cartagena Protocol on Biosafety, as adopted by the Law 72 of 2001.

The Government of Panama has been working on the implementing regulations of the Law that created the National Commission of Biosafety for Genetically Modified Organisms, in order to include clear procedures regarding the process and coordination among all the competent government agencies, in charge of authorizing the import of GMOs into Panama.

Section II. Plant Biotechnology Trade and Production:

According with the Government of Panama records, there’s no trade of GMOs.

However, Panama has authorized the use of biotech products only for research. That is the case of Pioneer’s “Herculex®” Corn seeds, which the Government of Panama conducted two official field

testing in the Province of Los Santos, Panama, with the technical supervision of the Panamanian Agricultural Research Institute (IDIAP, in Spanish) and the assistance of the importing company.

Also, Panama authorized the research in fish tanks at Boquete, Province of Chiriqui, of AquaBounty's AquAdvantage® Salmon, which includes a gene that provides the fish with the potential to grow to market size in half the time of conventional salmon. The Government of Panama has not authorized the salmon for commercialization, nor for human consumption.

Also, the National Commission of Biosafety for Genetically Modified Organisms of Panama is analyzing the formal requests for the approval of the genetically modified events: LLRice62 for human consumption, and Oxitec's genetically modified mosquitoes for research on Dengue fever.

Section III. Plant Biotechnology Policy:

The National Authority for the Environment (ANAM) is the Focal Point of the Cartagena Protocol on Biosafety in Panama.

The National Commission of Biosafety for Genetically Modified Organisms of Panama, is composed by:

a) Competent National Authorities:

- Ministry of Agricultural Development (MIDA, in Spanish)
- Ministry of Health (MINSA, in Spanish)
- Ministry of Commerce and Industry (MICI, in Spanish)
- Ministry of Foreign Relations (MIRE, in Spanish)
- National Authority for the Environment (ANAM, in Spanish)
- Panamanian Food Safety Authority (AUPSA, in Spanish)
- Authority of the Aquatic Resources of Panama (ARAP, in Spanish)

b) Institutions for Technical Support:

- National Secretariat for Science, Technology and Innovation. (SENACYT, in Spanish)
- Institute of Scientific Research and High Technology Services (INDICASAT AIP.)
- Agricultural Research Institute of Panama (IDIAP, in Spanish)
- Technological University of Panama (UTP, in Spanish)
- University of Panama
- Gorgas Memorial Institute for Health Studies.
- Authority of Free Competition and Consumer Rights (ACODECO, in Spanish)

The current objectives of the Commission are:

1. Promote and monitor the implementation of the Law that will amend the Law 48 of 2002, which creates the National Commission for Biosafety of genetically modified organisms.
2. Develop, promote and monitor the compliance of the regulations and manuals of procedures for the genetically modified organisms.
3. Strengthen and monitor the Biosafety Clearing House (BCH) of Panama.
4. Propose the establishment of capacity building in the institutions for Biosafety of Genetically Modified Organisms.

At the international level, Panama supports a policy of not requiring specific labeling for biotech products, a principle also applied in Panama for all food products, as established in article 36 of Law 45 of October 31, 2007.

In Panama there are no active organizations and/or public campaigns (press campaigns, public relations efforts, or other) that lobby either for or against the genetic engineering or cloning of agriculturally-relevant animals.

As it happens with GMOs, lack of scientific information could lead to rejection of this technology from the consumers and the public sector.

Panama doesn't have an active participation in discussions related to animal new technologies in international organizations such as OIE or OECD.

However, during the last eight years Panama has been an active participant in the multilateral negotiations of the Cartagena Protocol on Biosafety, under the Convention of Biological Diversity. Especially in the negotiations on article 27 of the Cartagena Protocol on Biosafety about *Liability and Redress*, in case of a damage caused by a Living Modified Organism (LMO).

Also, Panama has not negotiated to date, any type of Bilateral Agreement or Memorandum of Understanding with any other country regarding GMO's or LMO's.

The legal framework for GMO's is based on the following Laws:

- 1) [Law 72 of December 26, 2001](#), by which Panama approved the Cartagena Protocol *on Biosafety entered into force on January 29, 2000*.
- 2) [Law 48 of August 8, 2002](#) that creates the National Commission of Biosafety for Genetically Modified Organisms, and dictates other dispositions.
- 3) [Law 47 of 1996](#), establishing that for the import, export, research, experiment, release to the environment, reproduction and commercialization of transgenic plants, bio-control agents and seeds for production, the National Direction of Plant Health has to approve it.
- 4) [Law 23 of 1997](#), which regulates the Animal Health and Agricultural Quarantine.
- 5) [Law Decree 11 of February 22, 2006](#), which creates the Panamanian Food Safety Authority (AUPSA) and the dispositions for the import, transit and transboundary movement of food and feed into Panama.

The Law 72 of 2001, being an international agreement, is in force but has not been fully implemented.

The Law 48 of 2002, was implemented in February 26 of 2011, having it first meeting of the Commissioners, installed by the former Minister of Agricultural Development of Panama, Emilio Kieswetter, as last year's president of the Commission.

The Commission Presidency is to be rotated among the Ministers, currently the Presidency of the Commission is under the Minister of Health, Dr. Franklin Vergara. The Commission will be in charge to draft and implement the regulations for use, import, commercialization, and research of genetically modified organisms, and oversight of all aspects of production, introduction, consumption, etc. of all biotech products, and is to make a priority of the Cartagena Protocol and the precautionary principle.

The National Commission of Biosafety for Genetically Modified Organisms of Panama will not authorize directly the use, production, introduction or consumption of a genetically modified organisms (GMO) in Panama, but it will recommend the competent authority to approve or not the use, production, introduction, research or consumption of a GMO in Panama, and will recommend the adoption of Biosafety measures for genetically modified organisms, as well as the establishment of Expert groups to conduct risk analysis and risk assessments, case by case and step by step, with science-based evidence.

Those competent authorities are the following ministries and authorities:

- The **Ministry of Agricultural Development (MIDA)** is the competent national authority to regulate, control, approve and monitor the use, import, export, research, experiment, release to the environment, reproduction and commercialization and management of genetically modified organisms, such as live animals, semen and embryos, transgenic plants, bio-control agents and seeds for agricultural production.
- The **Ministry of Health (MINS)** is the competent national authority to regulate, control, approve and monitor the use and management of genetically modified organisms and biotechnology developments, conducted on national territory, affecting human health and the establishment of biosafety standards required for human protection.
- The **Ministry of Commerce and Industry (MICI)** is the competent national authority responsible for ensuring that negotiations and international trade agreements that involve the use of genetically modified organisms and biotechnology transfer, does not affect domestic production and investment, the environment, biodiversity and human health, and ensures the best interests of Panama.
- The **National Authority for the Environment (ANAM)** is the competent national authority for the implementation of the Cartagena Protocol on Biosafety and of the Convention on Biological Diversity, as the Focal Point of Panama, as well as management and environmental management of natural heritage and biodiversity of Panama. Has the power to regulate and control access to and use of biogenetic resources in general, and establishing, approving and monitoring compliance with the rules and procedures of risk assessment for the release into the environment, mitigation impacts on biodiversity and the environment, including the protected areas.
- The **Panamanian Food Safety Authority (AUPSA)** is the competent national authority that regulates and enforces the compliance of the sanitary and phytosanitary measures and quality standards related to the import, transit and transboundary movement of food and feed into Panama.
- The **National Secretariat of Science, Technology and Innovation (SENACYT)**, is the competent national authority for the promotion of research for the development and transfer of biotechnology in general, and for the regulation of LMO's for use in scientific research.
- The **Authority of Aquatic Resources of Panama (ARAP)** is the entity with responsibility for the authorization, control, supervision, monitoring, and release to the aquatic environment of marine and aquatic organisms genetically modified, that are located outside the protected areas.
- The **Authority for Consumer Protection and Defense of the Competition (ADECO)** is the entity responsible for protecting and ensuring the process of free economic competition and free competition, eliminating monopolistic practices and other restrictions in the efficient functioning of markets for goods and services, and to preserve the best interests of consumers in Panama.

The Panamanian Government has a very pro-business focus. One would expect this pro-business approach to positively influence agricultural biotechnology regulations.

Also, the National Authority for the Environment (ANAM) asked the United Nations Environmental Programme (UNEP) to have the non reimbursable funds from the Global Environment Funds (GEF), to help Panama in the implementation of the Cartagena Protocol on Biosafety in Panama, and its National Legal Framework.

Section IV. Plant Biotechnology Marketing Issues:

From time to time, local newspapers publish articles (that appear to come from foreign sources) advising of the alleged dangers to humans posed by foods prepared with GMOs, and also of the supposedly catastrophic impact on the environment if GMOs are produced in the country. With less frequent articles that talk about the benefits of GMOs and their products. So far, consumers have shown a high degree of confidence in the ability of local authorities to handle in an appropriate manner this category of food products.

There have been no market studies in Panama to assess consumer acceptance of GMOs.

Research at local Universities focuses on tissue culture of some species of economic importance, for their reproduction in disease free environments. Resources have not been devoted to manipulating genes or sections of the DNA molecule as a means to produce new GMOs.

Section V. Plant Biotechnology Capacity Building and Outreach:

Most agriculture professionals graduate from local universities that lack advanced training in modern developments in biotechnology. This may hurt perceptions of GMOs by many, including those who tend to distrust big industries and new methods of mass production of food products. There are two private consumers' associations that are expressing concern about lack of protection that authorities are giving to consumers of medicines and of some imported food products, mainly from Asia. They could reject or embrace GMO's, depending on the information they receive in the future.

Education and outreach present themselves as the best alternatives to promote accurate information about GMO's in a market that clearly understands the benefits of trade and friendly relations with the United States.

The USDA's Cochran Fellowship Program has a crucial effect on the government officials selected as candidates for training in Biotechnology. FAS/Panama also has brought several speakers on Biotechnology to Panama in 2007, 2009, 2010 and 2011 to give a series of presentations to both government officials and food importers, using Department's of State EEB Program for Biotechnology.

Many local technicians and government officials working in this field, including policy, teaching, and laboratory research, would greatly benefit from short term trainings in the U.S., but the language barrier has prevented this exchange. If biotechnology courses in Spanish could be provided, it would be of great benefit to improve local knowledge and create regulations based on science and risk analysis.

For example, in the area of human health there are only certified clinical diagnostic tests, for public health diseases. There is no certified diagnostic test on transgenic organisms.

Panama has lack of physical infrastructure for research or experimental trials of GMO's in greenhouses, or confined plots, under biosafety measures.

Panama, through the UNEP – GEF Project, for representatives of the competent national authorities and academic institutions, has focused on training on the Cartagena Protocol on Biosafety and how to register and search data in the Biosafety Clearing House (<http://bch.cbd.int/>).

Also in Panama are other agro-biotechnologies applied, such as plant tissue culture, molecular biology, in vitro conservation, cryopreservation, and genetic engineering. In the health sector, there is a capacity to diagnose diseases ^[iii].

^[iii] Inter-American Institute for Cooperation on Agriculture (IICA). Agro-biotechnology in Latin America and the Caribbean. Current situation of it development and adoption. 2008. 62 pages.

Section VI. Animal Biotechnology:

In Panama, genetic engineering has only being used for the development in fish tanks at Boquete, Province of Chiriqui, of AquaBounty's AquAdvantage® Salmon, which includes a gene that provides the fish with the potential to grow to market size in half the time of conventional salmon. The research of the private company, supervised by the National Commission of Biosafety for Genetically Modified Organisms of Panama has been giving positive results. However, the Government of Panama has not authorized the salmon for commercialization, nor for human consumption.

There are no other agriculturally-relevant animals genetically engineered and therefore, there has not been any public initiative in this field.

The production of food products from genetic engineered animals is not well understood by local consumers. This reflects in the fact that lawmakers do not think this is a priority in the issuing of new regulations and therefore, there have not been any discussions of related regulatory policies for genetic engineering of animals.

Section VII. Current Progress:

Panama is taking huge steps on Biotechnology in this Government's administration. At the beginning of 2011, the law that created the National Commission of Biosafety for Genetically Modified Organisms of Panama was finally implemented, after almost 10 years of it entering into force. Now this Commission is analyzing (using technical and scientific procedures to approve or reject) every request of import, or research, or production in Panama with Genetically Modified Organisms (GMO), putting the country in the world map of countries importing and producing GMOs. Unfortunately, the Government of Panama has not given the economic resources in their budget in order to promote and develop new GMO's in Panama, as other countries has done, through universities or agricultural research institutions.